

Appl. No. 09/503,608
Amdt. dated June 21, 2004
Reply to Office Action of April 22, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend claim 1 as follows:

1. (currently amended): A method of preventing a flooding attack on a network server in which a large number of connectionless datagrams are received for queuing to a port on the network server, comprising:

determining, in response to the arrival of a connectionless datagram from a host for a port on the network server, if the number of connectionless datagrams already queued to the port from the host exceeds a prescribed threshold;

discarding the connectionless datagram, if the number of connectionless datagrams already queued to the port from the host exceeds the prescribed threshold; and

queuing the connectionless datagram to a queue slot of the port, if the number of connectionless datagrams already queued to the port from the host does not exceed the prescribed threshold.
2. (previously presented): The method of claim 1 wherein the determining if the number of datagrams already queued to the port from the host exceeds a prescribed threshold further comprises:

calculating the prescribed threshold by multiplying a percentage P by the number of available queue slots for the port.

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3. (previously presented): Apparatus for preventing a flooding attack on a network server in which a large number of datagrams are received for queuing to a port on the server, comprising:

means for determining, in response to a datagram from a host for the port on the network server, if the number of datagrams queued on the port by the host exceeds a prescribed threshold;

means responsive to the determining means for discarding the datagram, if the number of datagrams queued on the port by the host exceeds the prescribed threshold; and

means for queuing the datagram to a queue slot of the port, if the number of datagrams queued on the port by the host does not exceed the prescribed threshold.

4. (previously presented): The apparatus of claim 3 wherein the means for determining if the number of datagrams already queued to the port from the host exceeds a prescribed threshold further comprises:

means for calculating the prescribed threshold by multiplying a percentage P by a number of available queue slots for the port.

5. (previously presented): A storage media containing program code that is operable by a computer for preventing a flooding attack on a network server in which a large number of datagrams are received for queuing to a port on the network server, the program code including instructions for causing the computer to execute the steps of:

determining if the number of datagrams already queued to the port from the host exceeds a prescribed threshold, in response to a datagram from a host for the port on the network server;

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discarding the datagram, if the number of datagrams already queued to the port from the S host exceeds the prescribed threshold; and

queuing the datagram to a queue slot of the port, if the number of datagrams already queued to the port from the S host does not exceed the prescribed threshold.

6. (previously presented): The storage media of claim 5 further comprising the step of:

calculating the prescribed threshold by multiplying a percentage P by a number of available queue slots for the port.

7. (previously presented): A carrier wave containing program code that is operable by a network server for preventing a flooding attack on the network server in which a large number of datagrams are received for queuing to a port on the server, the program code including instructions for causing the network server to execute the steps of:

determining, in response to receipt of a datagram from the host for queuing to the port on the network server, if the number of datagrams already queued to the port from a host exceeds a prescribed threshold;

discarding the datagram, if the number of datagrams already queued to the port from the host exceeds the prescribed threshold; and

queueing the datagram to the port, if the number of datagrams already queued to the port from the host does not exceed the prescribed threshold.

8. (previously presented): The carrier wave of claim 7 wherein the program code further includes instructions for causing the network server to execute the step of:

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calculating the prescribed threshold by multiplying a percentage P by a number of available queue slots for the port.

9. (previously presented): The method of claim 1 further comprising:
configuring a maximum number of connectionless datagrams allowed to be queued at the port.

10. (previously presented): The method of claim 9 wherein the configuring step further includes configuring a controlling percentage of available queue slots remaining for the port; and

wherein the prescribed threshold is based on the controlling percentage of available queue slots remaining for the port.

11. (previously presented): The method of claim 1 wherein the port comprises a plurality of queue slots, the method further comprising:

maintaining a number of available queue slots of the plurality of queue slots for the port.

12. (previously presented): The apparatus of claim 3 further comprising:
a means for configuring a maximum number of connectionless datagrams allowed to be queued at the port.

13. (previously presented): The apparatus of claim 12 wherein the means for configuring further comprises configuring a controlling percentage of available queue slots remaining for the port.

14. (previously presented): The storage media of claim 5 wherein the computer is the network server.